

Information Paper 20 October 2010 **INVASIVE SPECIES COMPENDIUM**

WHAT IS THE INVASIVE SPECIES COMPENDIUM (ISC)?

An international Development Consortium is compiling the Invasive Species Compendium (ISC). It will be released in 2011 as a multimedia encyclopaedic treatment of several thousand invasive species. See <http://www.CABIcompendium.org>

The ISC will be the most extensive and authoritative compilation on the subject. It will be available for use on an open-access basis.

The ISC will cover recognition, biology, distribution, impact and management of invasive species, on a global basis. Invasive species of all taxa will be covered, including plants, fungi, bacteria, viruses, insects, nematodes, molluscs and vertebrates. Their impact on natural ecosystems and on biodiversity will be considered, and also on systems managed for agriculture, forestry, aquaculture etc. GIS will be used to display geographic distributions. Extensive reference materials will be available, including illustrations, library documents, bibliographic abstracts, case studies and statistical data.

Content is derived from thousands of expert scientists, throughout the world. The ISC's authority derives from their expertise, from verification through peer review, from quality control through rigorous editing, and from user feedback.

Other content is derived from existing compilations of knowledge on invasive species, from organizations such as ISSG, GISP and IABIN.

Content is presented dynamically through the Compendium technology - on an advanced web-based platform combining databases, text, images, GIS, taxonomic relationships and search tools, in an interactive framework. This is designed to respond intuitively to linkages made by the user, both within the Compendium and in relationships with other local or remote knowledge bases.

The ISC will be maintained, enhanced and regularly updated into the future, on a sustainable basis.

The ISC will be freely available to all on an open-access basis.

WHO IS MANAGING THE PROJECT TO DEVELOP THE ISC?

The ISC is being developed by a Development Consortium of partners, led by the international organization CAB International (CABI) in association with the US Department of Agriculture (USDA). CABI, a non-profit, science-based, knowledge organization, has a mission to provide information and apply scientific expertise to solve problems in agriculture and the environment.

CABI is a not for profit organisation

CABI improves people's lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment.

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CABI has led the development of four Compendia previously (Crop Protection Compendium; Forestry Compendium; Animal Health & Production Compendium; Aquaculture Compendium), through a total investment of more than US\$ 10 M. An independent cost-benefit analysis commissioned by ACIAR puts the value of these Compendia through time-saving by Australian public-service staff at US\$ 1.1 M per year.

The Development Consortium provides the leadership of the ISC project, at a strategic level. It also provides the financial resources. The project to develop the ISC over 3 years, and then to sustain it for 5 years, is budgeted at US\$ 4.75 M. Members of the Development Consortium make contributions to this budget, on the principle of sharing the costs and sharing a package of benefits.

Existing Members of the Development Consortium are:

- Australia, Group Membership (CRCNPB, GRDC, HAL, IACRC)
- Canadian Food Inspection Agency
- Canadian Forest Service
- Canadian International Development Agency
- India, Ministry of Agriculture
- Malaysian Agricultural Research and Development Institute
- Mexico, National Health, Safety and Quality Service for Agri-Food (SENASICA)
- Monsanto
- Netherlands Ministry of Agriculture, Nature and Food Quality
- Secretariat of the Pacific Community (SPC)
- Swiss Agency for Development and Cooperation
- Syngenta Crop Protection
- UK Department for Environment, Food and Rural Affairs (Defra)
- UK Department for International Development (DFID) / CABI / FARA
- US Agency for International Development
- US Department of Agriculture, Agricultural Research Service (ARS)
- US Department of Agriculture, Animal and Plant Health Inspection Service (APHIS)
- US Department of Agriculture, Foreign Agricultural Service (FAS)
- US Department of Agriculture, Forest Service (FS)
- US Department of Agriculture, Invasive Species Coordination Program
- US Department of Agriculture, Natural Resources Conservation Service (NRCS)
- US Department of Agriculture, Rural Development
- US Department of Commerce, NOAA's National Ocean Service
- US Department of the Interior, Fish and Wildlife Service

New Members are expected from Latin America, Asia, Australasia, Europe and North America.

Development Consortium Members receive a package of benefits, briefly:

- Contributing to an international effort to compile a global knowledge base on invasive species, rather than supporting independent action
- A seat at the table* to determine strategic direction
- Leveraging a US\$ 4.75 M development through a modest investment**
- CABI's commitment to deliver, and to sustainably maintain, update and enhance the ISC
- Visibility as one of the developers

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- Unlimited access to the Compendium, with continuous updating and enhancement, and participation in planning its sustainability
- Opportunity for discussion of common interests in an international forum of like-minded representatives of public- and private-sector organizations and development-assistance agencies.

Benefits continue for a period of five years.

*For example at the Workshop of the Development Consortium, which meets next on 16-17 November 2010.

**The commitment requested by the Consortium is a Contribution of US\$ 175,000, usually paid in two instalments, the first US\$ 95,000, the second US\$ 80,000. For developing countries the Contribution is reduced to US\$ 130,000, in instalments of US\$ 70,000 and US\$ 60,000.

HOW CAN USERS AND PARTICIPANTS BENEFIT?

When the ISC is released in 2011 it will be freely available for use as a powerful knowledge base to address practical issues concerning the impact of thousands of invasive species - on the environment, on biodiversity, and on agriculture, forestry and fisheries. It will span the boundary between impacts on food security (through the productive use of land and water) on the one hand, and on the environment and biodiversity on the other.

The ISC will have value in protection from invasive incursions (including providing data for tools with predictive capability), in management of establishing and established species, and in extension, training, public awareness, research & development, and policy making. It will have special utility in the local production of derived materials - for example public information notices and training tools.

Through Membership of the Development Consortium, new participants have the opportunity to leverage the contributions of all the other Members and to receive the benefits of a US\$ 4.75 M development based on global expertise, for a modest investment. Membership positions participants to ensure that their own priorities are duly considered in the ISC's development and ongoing maintenance and enhancement. Membership presents a visible token of participation and leadership in a project that is positioned to make a global impact. Members have opportunity for discussion of common interests in an international forum of like-minded representatives of public- and private-sector organizations and development-assistance agencies.

WHAT STAGE HAS THE PROJECT REACHED?

See <http://invasivespecies.wiki.zoho.com/HomePage.html>

The ISC development project is being managed in three phases. The first phase, completed after 18 months in 2008, delivered an Alpha version covering 1,000 species. This is available to Development Consortium Members for use and for feedback.

During the second phase, many more species are being added, with enhanced development of the IT platform, and with the development of advanced search tools. A Beta version will be delivered in 2010. The budget for the first two phases is US\$ 3 M.

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WHAT ARE THE NEXT STEPS?

The ISC will be released in 2011. Then, in the third phase, the ISC will be sustained through continual updating, and will be enhanced, with the participation of Consortium Members and in response to feedback from users. The first 5 years of this process of sustainability are being planned, to a budget of US\$ 1.75 M.

INVITATION TO MEMBERSHIP OF THE DEVELOPMENT CONSORTIUM

Potential new participants are warmly invited to express interest in the project, and specifically in Membership of the Development Consortium. This can be followed up through correspondence or visits to explore the benefits of participation in the context of the particular needs of the participant. Members can have a major influence over the development of the ISC.

FREQUENTLY ASKED QUESTIONS

1. Stage of development of the ISC

The Alpha version, on a new web platform, has been released to Members of the Development Consortium, after 3 years of development. It contains:

- Full datasheets on more than 1400 invasive species and related topics, prepared by 1000 specialists from throughout the world, peer-reviewed, and edited by CABI. For each species the datasheet covers:
 - Identity: including names, taxonomy, description
 - Images
 - Distribution: including global and regional maps
 - Biology and Ecology: including habitat, host species, genetics, physiology, environmental requirements, epidemiology, vectors, natural enemies
 - Impact: including economic, environmental, cultural
 - Management: including diagnosis, detection, control (regulatory, genetic, cultural, chemical, biological) and risk analysis tool
 - Gaps in knowledge / research needs
 - References: linked to abstracts and, where available, to full text
- Basic datasheets on a further 2000 species
- 4000 images
- 50,000 abstracts of the published literature on invasive species
- Full text of 2500 relevant published documents
- Powerful search and browse facilities

The Beta version, with extended content and enhanced functionality, has been released for testing in October 2010.

The definitive ISC will follow in 2011. It will be updated and enhanced on an ongoing basis: the business plan covers this at least until 2015 with the intention of indefinite continuation.

2. Open Access

Open Access, free at the point of use, was proposed and agreed at the ISC Inception Workshop in 2006. Costs of maintenance will be covered by donor contributions.

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3. Funding

The budget, over 8 years to 2015, for development and maintenance of the ISC is US\$ 4.75 M. Contributions to date, from more than 20 Members of the Development Consortium, amount to more than US\$ 3 M. Thus the project is not fully funded through to 2015, but the phase of development and release of the definitive ISC in 2011 is already funded.

New Consortium Members are asked to make a one-time contribution of US\$ 175,000, paid over 1 or 2 years. Each new Member makes an essential contribution towards the development target. (No distinction is made between Members who join the Consortium earlier and later in the allocation of funds.)

4. Benefits of participation

Through Membership of the Development Consortium, new participants have the opportunity to leverage the contributions of all the other Members and to receive the benefits of a US\$ 4.75 M development based on global expertise, for a modest investment. The full package of benefits is described above, see "Who is managing the project to develop the ISC?".

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CABI International is a leading global not-for-profit organisation. Its purpose is the generation, dissemination and use of knowledge in the applied biosciences to enhance development, human welfare and the environment.

***** **Home page for CABI Compendia** *****

Crop Protection - Forestry - Animal Health and Production - Aquaculture - Invasive Species

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